Madhav Malpani

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EDUCATION

University of California San Diego

- Bachelor of Science in Artificial Intelligence *Expected graduation date: June 2030*

EXPERIENCE

Mechanical Design and Fabrication Intern | Jun 2025 – Jul 2025 | Surat, Gujarat
Space Technology and Aeronautical Rocketry (Space-Tech/Research Startup)

- Simulated EMI radiation from a steel tape antenna for a 1U CubeSat using CST Studio
- Designed and soldered the PCB for the GPS and communication system of the CubeSat with 4 aerospace engineers
- Sketched 10+ burn-wire antenna deployment mechanisms inspired from Japanese wood joinery.
- Presented the CubeSat's capabilities and applications, engaging 4 founders and 20+ trainees

Machine Learning Intern & Trainee | Jan 2025 – Feb 2025 | Hybrid
Department of Electrical Engineering IIT Kanpur , Indian Institute of Technology Kanpur, Techkriti (Student organization)

- Studied fundamental machine learning models & linear algebra concepts to understand the foundations of ML.
- Applied these concepts by developing a digit classification project using SVM model that reached 98% accuracy

Electronics team member | Aug 2026 – Present Triton
Robotics, University of California San Diego

- Designed CAN transceiver breakout board for the main microcontroller (STM32, NVIDIA Jetson)

Founder | May 2024 – Dec 2025
pickleitdown, Surat, Gujarat (pickleitdown)

- Organised pickleball tournaments in the locality and formed a community of 100+ pickleball enthusiasts.
- Co-ordinated between venue owners, vendors, players, and sponsors for tournaments and making 4 figures in revenue.
- Handled social media presence for regular updates and posted content from tournaments for audience growth.

PROJECTS

Quadruped | Aug 2026 – Present (GitHub)

- Assembled an open-sourced quadruped to understand the code & mathematics behind the forward and inverse kinematics.
- Coded a python framework for controlling servos according to input joint angles and end-effector coordinates.

Air Quality Monitor | Sep 2025 – Nov 2025 (GitHub) (LinkedIn)

- Built a real-time air quality monitor to track the live concentration of pollutants in my surroundings.
- Developed a dual-breadboard prototype to learn circuit construction and component interactions, while referring to datasheets.

HydroSafe | Surat Municipal Corporation | Project lead |Aug 2025 – Oct 2025 (LinkedIn)

- Built a working prototype of a tile integrating piezoelectric sensors, springs for storing pipes for water drainage to find a solution to water clogged roads and potholes on roads.
- Collaborated with a classmate to form hypothetical failure situations and find a range for spring's constant.
- Presented the project at the district's science fair to spread awareness amongst 100+ visitors including the mayor.

TritonSpend-AI | Oct 2026 – Nov 26 (GitHub) (tritonspend-ai)

- Built an AI powered application to help 200+ students smartly finance their budget for food on campus.
- Tracks students' spending trajectory with statistics deterministic ML model trained on previous purchases & eating habits
- Integrated with a live chat for students to discuss their reviews on venue and food.

AWARDS & HONOURS

International Computer Science Competition Finalist (top 500 out of 10,000) 2025

- Involved MCQs based and Research Paper Analysis based tests on computer science topics

Placed in top 7 teams out of 200+ teams in cOmpiled-16 UCSD hackathon 2026

- Built a single platform for tackling logistical problems in freight transportation over long distances. Pitched demo to YC backed companies

Ramanujan National Math Competition 2024: Nationally ranked 373

- National-level mathematics competition testing problem-solving and mathematical reasoning

SKILLS

Software Tools: Onshape, GitHub, EasyEDA, CST Studio, Claude Code, Codex
Programming Languages: Python, Java, C/C++, TypeScript
Engineering & Technical: Embedded Systems, PCB Design, Soldering, IoT Systems, Vibe coding, 3D printing